



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,951	10/23/2003	Ronald A. Holland	C043770/0126119	6317

49328 7590 03/24/2005

BRYAN CAVE LLP  
211 NORTH BROADWAY  
SUITE 3600  
ST. LOUIS, MO 63102-2750

EXAMINER
----------

LUM VANNUCCI, LEE SIN YEE

ART UNIT	PAPER NUMBER
----------	--------------

3611

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/691,951

Applicant(s)

HOLLAND, RONALD A.

Examiner

Lee Lum

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 44-48 and 54-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 44-48, 54-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. An Election Reply was filed 12/15/04, which also included amendments to Claims 1-10, and new Claims 44-63.

Applicant's election with traverse of Claims 1-5, 44-48, and 54-58 in the reply filed on 12/15/04 is acknowledged. The traversal is on the ground that the embodiments are "highly related", and thus, a search including all claims would not be burdensome. This argument is not persuasive because the only proper traversal of a species requirement is an admission towards the multiple species as being obvious variants.

The requirement is still deemed proper and is therefore made FINAL.

2. A Substitute Spec was filed 12/15/04, and will be entered into the application.

The Amendment also filed on the same date includes the following drawing corrections:

- a. A Replacement sheet for fig 4.
- b. Withdrawal of (original) figs 4, 6 and 7.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-5, 44-48 and 54-58** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Claims are unclear because they fail to provide sufficient structure to substantiate the function "whereby...the motor...can drive the vehicle independently". Sufficient structure exists to describe only pedal action, and both motor and pedal action, as propelling the vehicle, via a chain that operates between the crank assembly and motor, as recited in Claims 1, 44 and 54.

Art Unit: 3611

However, according to the Spec, paragraph 11, and drawings (figs 1-2), a mechanism (e.g., chain) is required between the motor and rear hub, permitting the motor to solely propel the vehicle. The single chain that is recited does not facilitate this function.

Amendment/clarification is required.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

*As best understood, Claims 1, 44 and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Davidson et al 4085814.*

Re **Claims 1 and 54**, Davidson discloses an electric drive vehicle, comprising  
Frame 11 and wheel 11a with hub (unidentified, inherent),  
the hub having at least one sprocket 25,  
Electric motor 14 mounted to the frame, having  
Rotatable assembly 15, and,  
Fixed assembly (unidentified, inherent motor housing) to which the motor is  
mounted to the frame,  
Motor sprocket 16 fixedly mounted to the rotatable assembly,  
Engaging chain 26 and hub sprocket 25, and transferring motion from the motor  
to the wheel,  
Pedal crank assembly including chain wheel 12,  
Uni-directional drive engaging the rotatable assembly of the motor and the crank  
assembly for transferring motion from the pedal crank to the motor, but not vice versa (c4, ln 56-  
61),  
Whereby, *as best understood*, either/both crank and motor drives the vehicle.

Re **Claim 44**, the reference also discloses a method of providing an electric drive on a pedal-powered vehicle, the steps derived from the structure and/or means provided above.

Art Unit: 3611

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**A. Claims 2-4, 45-47 and 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson in view of Rudwick 4280581.**

*As best understood*, Davidson discloses the previously-recited elements, but does not disclose the rear hub as multi-speed with shiftable internal gears. Rudwick shows this extremely well-known hub 26. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this arrangement, as shown in Rudwick, to permit speed changes for different riding situations, thereby increasing enjoyment and safety, and decreasing rider effort, as is very well-known in the art.

**B. Claims 5, 48 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson in view of Olsen 5799747 and Gelhard 4541500.**

*As best understood*, Davidson discloses the previously-recited elements, but does not disclose the motor as brushless, direct-current, and gear-less. Olsen shows this type of motor in c3, ln 48-51, with "permanent magnet DC motors", which is rechargeable as disclosed in c6, last paragraph to ln 66.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this motor type, as shown in Olsen, as an alternative to larger motors requiring brushes and a gear configuration, thus decreasing weight and size. Additionally, the recharging capability is well-known in these vehicles having batteries as the power source because this function is self-supporting and efficient at a low cost.

Neither Davidson nor Olsen teaches a "slow-speed" DC motor. Gelhard shows this type of motor in c2, ln 57-60. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this feature, as shown in Gelhard, as an alternate motor embodiment for specific applications. Motor capacity is known to depend on the particular requirements of the particular system, and this feature does not solely dictate the proper operation of the invention.

Art Unit: 3611

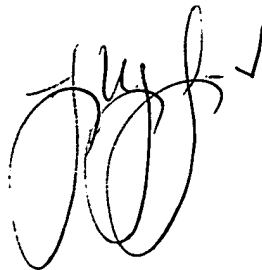
6. The prior art made of record, and not relied upon, is considered pertinent to the disclosure: Mayer et al RE 37583E, Buchner 6347682, Kwan 6305485, Ohnuma 6157149, Birkestrand et al 6144125, Wada 6131683, Chai 6062329, Goodwin 5361863, Lean et al 5024286.

7. Communication with USPTO/Examiner

Any inquiry concerning this communication, or others, should be directed to Ms. Lum at 571 272-6649, M-Th, 9-6. If she cannot be reached, her supervisor, Ms. Morris may be reached at 571 272-6651. Our fax number is 703 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications: private PAIR. For published applications: private or public PAIR. Questions re private PAIR: contact the Electronic Business Center (EBC) at 866 217-9197.

Ms. Lee S. Lum  
Examiner  
3/17/05



**LESLEY D. MORRIS**  
**SUPPLEMENTARY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**